## **CLAIMS**

What is claimed is:

- 1. A method of increasing the safety of an in-shell chicken egg comprising:
- a. providing a liquid bath containing an anti-bacterial agent and water;
  - b. heating the bath to a temperature above 126° F;
- c. placing the egg in the bath until a central portion of a yolk of the egg is controlled within a temperature range of 126° F to 200° F;
- d. maintaining that controlled yolk temperature range for times, (i) sufficient that a Salmonella species present in the egg yolk is reduced in amount such that the egg is pasteurized but (ii) insufficient that an albumen functionality of the egg measured in Haugh units is substantially less than the albumen functionality of a corresponding unpasteurized in-shell chicken egg.
- 2. The method of Claim 1 wherein the bath containing an anti-bacterial agent and water is comprised of water and hydrogen peroxide.
- 3. A method of providing an in-shell chicken egg resilient to re-contamination comprising:
- a. removing a substantially pasteurized egg from a pasteurizing medium which egg is at a temperature at or above ambient temperature and which egg is substantially pasteurized without substantial loss of functionality;
- b. applying a sealant to the egg, wherein the sealant comprises a wax emulsion at a temperature above the temperature of the egg.
- 4. The method of Claim 3 further comprising applying an anti-bacterial agent to the egg before applying the wax sealant to the egg.
- 5. The method of Claim 3 wherein the wax emulsion comprises a mixture of paraffin wax, water and a quaternary ammonia salt.

- 6. A method of prolonging the shelf life of an in-shell poultry egg comprising:
  - a. providing a liquid bath containing an anti-bacterial agent and water;
  - b. heating the bath to a temperature above 126° F;
- c. placing a plurality of eggs in the bath until a central portion of a yolk of each of the eggs is controlled within a temperature range of 126° F to 200° F;
- d. maintaining that controlled yolk temperature range for times, (i) sufficient that a Salmonella species present in the egg yolk is reduced in amount such that the egg is pasteurized but (ii) insufficient that an albumen functionality of the egg measured in Haugh units is substantially less than the albumen functionality of a corresponding unpasteurized in-shell chicken egg;
  - e. removing the plurality of eggs from the bath; and
  - f. applying a sealant to substantially all of each of the plurality of eggs.
- 7. The method of Claim 6 further comprising applying an anti-bacterial agent to the plurality of eggs prior to placing the plurality of eggs in the bath.
- 8. The method of Claim 6 further comprising heating the bath to a plurality of temperatures, each of which is above 126° F.